

# Flooring bid scope

**Project Name:**  
**CNS/VAPA Epoxy Flooring**

**Project address:**

- North Ave Warehouse 4680 North Ave Oceanside, CA, 92056
- Vista Academy of Visual and Performing Arts (VAPA)  
600 N Santa Fe Ave Vista, CA, 92083



**Description:**

- This project consists of the restoration of the flooring and walls in all areas of our central kitchen, offices, corridors, restrooms, break rooms, and work rooms listed in the attached scope documents. Including but not limited to the removal of cabinetry and sinks. Where casework and plumbing is removed, contractor to patch and paint to match existing finish. All moving of kitchen equipment, removal or prep existing flooring for installation, mechanical abrasion of the substrate, installation of a commercial grade epoxy flake flooring system to be provided and installed to manufacturers specifications to match flooring in adjacent rooms. Contractor to include, cleaning of all sinks and countertops and FRP, replacing grease traps covers, and floor sink covers, patch and paint drywall with district approved colors and specifications.

**Contractor License Requirements:**

- B - General Contractor, C - 15, C- 33

**Project Duration:**

- The North Avenue facility will be available for construction beginning 6/4/25, and must be completed and occupied no later than 7/25/25. Liquidated damages may apply per contract documents if not completed by the agreed timeline. Scope of work for this includes: Demo of all specified casework and cabinetry, and plumbing,

patch and paint walls to match existing, Also including painting of full walls in all offices, corridors, bathrooms, breakrooms, and work rooms.

- Approximately 8000 sq ft of new epoxy flooring to be installed contractor to verify
- - Mechanically prepare the substrate per the material manufacturers specifications.
- - Install 6" hand troweled integral cove base.
- - Apply 125mils of Urethane cement with flake broadcast.
- - Apply Epoxy with 2nd flake broadcast.
- - Grout coat using epoxy.
- - Topcoat using UV stable polyaspartic.

**Vista Academy of Performing arts** will be available for construction beginning after a remediation contract, and must be completed and occupied no later than 7/25/25. Liquidated damages may apply per contract documents if not completed by the agreed timeline. Scope of work for this includes:

- Approximately 1400 sq ft of new epoxy flooring to be installed contractor to verify
- - Mechanically prepare the substrate per the material manufacturers specifications.
- - Install 6" hand troweled integral cove base.
- - Apply 125mils of Urethane cement with flake broadcast.
- - Apply Epoxy with 2nd flake broadcast.
- - Grout coat using epoxy.
- - Topcoat using UV stable polyaspartic.

#### **Drawing and Specs:**

See attached pages.

#### **Estimate:**

- **Flooring \$328,000**
- **Paint \$15,500**

**Allowance: \$34,350**

10%, if other, please provide justification

**Project Manager:**

- Ben Williams, [Jose Matavilla](#)

**Funding Source:**

- Child Nutrition Services

# Technical Specification

# **ARCHITECTURAL GUIDE SPECIFICATION**

## **MASTER FORMAT SECTION 096700 – FLUID-APPLIED FLOORING**

### **KEY CHIP 100**

#### **20-30 Mil Decorative Epoxy Resinous Flooring UV Light Resistant Sealer**

## **PART 1 GENERAL**

### **1.01 SUMMARY**

#### **A. Section Includes:**

1. Fluid applied seamless flooring with integral cove base.
2. Joint, edge, and termination strips.
3. Prior to installation of structural floor slab, advise [General Contractor] [Construction Manager], in writing, of all requirements of concrete substrate regarding finish, level tolerance, and curing; see INSPECTION in Part 3.
4. Locate all flexible joints required. See submittals below.
5. Accessories necessary for complete installation.

#### **B. Related Sections:**

1. Cast-in-Place Concrete: Section 03300.
  - a. Concrete sub-floor to be level (maximum variation not to exceed ¼ inch in 10 feet) and to have a steel troweled finish. No curing agents or other additives which could prevent bonding should be used unless the mechanical surface preparation method completely removes the curing agent residue or sealer.
  - b. Slabs on grade must have an efficient puncture resistant vapor barrier placed directly under the slab.
2. Sealants: Section 07920.
3. Gypsum Drywall: Section 09250.
4. Adjacent floor finishes: Division 9.

### **1.02 REFERENCE STANDARDS**

The publications listed below from a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

#### **A. American Society for Testing and Materials (ASTM) Publications:**

- C-307      Test Method for Tensile Strength of Chemical-Resistant Mortars.

- C-501      Test Method for Relative Resistance to Wear Unglazed Ceramic Tile by the Taber Abraser.
- C-531      Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing.
- C-579      Test Methods for Compressive Strength of Chemical-Resistant Mortars and Monolithic Surfaces.
- C-580      Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing.
- C-884      Test Method for Thermal Compatibility Between Concrete and an Epoxy Resin Overlay.
- D-570      Water Absorption of Plastics.
- D-695      Compression Properties of Rigid Plastic.

**B.      Military Specifications (Mil. Spec.)**

- MIL D-3 134 F      (Impact Resistance) Section 4.7.3.
- MIL D-3 134 F      (Indentation Resistance) Section 4.7.4.
- MIL D-3 234 F      (Resistance to Elevated Temperature) Section 4.7.5.

**C.      ACI 301 Specifications for Structural Concrete for Buildings (most recent edition). Committee in Concrete 403 bulletin 59-43, Bond Strength to Concrete.**

**1.03      DEFINITIONS**

- A.      Epoxy resin flooring is a durable, seamless flooring system created by applying a two-part epoxy resin and hardener mixture to a concrete floor, forming a hard, protective, and often decorative surface.

**1.04      SYSTEM DESCRIPTION**

- A.      System shall be 20-30 mil epoxy coating with broadcast colored chips (flakes) to form a decorative surface. Surface finish shall be a clear two component UV light resistant epoxy sealer.

**1.05      SUBMITTALS**

- A.      Samples: Submit 6 by 6 inch cured samples of flooring system indicating color combination and non-skid properties. Approved samples will be used during installation for product match.
- B.      Certified Test: Submit two copies of suppliers/ manufacturers written certification that flooring system meets or exceeds required properties.

- C. Manufacturers Application Instructions: Submit descriptive data and specific recommendations for mixing, application, curing including any precautions of special handling instructions required to comply with the Occupational Safety and Health Act.
- D. Shop Drawings: Shop Drawings shall be furnished showing installation of cove base and termination details, and details at floor material transitions and where adjoining equipment.
  - 1. Locate and provide detailing for flexible joints required for flooring in area of installation.
- E. Maintenance Instructions: Submit current copies of the flooring manufacturer's printed recommendations on maintenance methods and products. Submit in accordance with Section 01730 - Operation and Maintenance Manuals.

## **1.06 QUALITY ASSURANCE**

- A. Materials used in the floor surfacing shall be the products of a single manufacturer.
- B. Installation shall be performed by an applicator with a minimum of 3 years' experience in work of similar nature and scope. Installer must be approved by the manufacturer of the floor surfacing materials. The contractor shall furnish a written statement from the manufacturer that the installer is acceptable.
- C. Installer to verify locations of all flexible joints required by the provisions of this Section and by the recommendations of the related material manufacturers.
  - 1. Joint locations may or may not be shown in drawings.
  - 2. Refer to drawings required under SUBMITTALS above.
- D. Installer to keep daily log of the date of installation, room number, type, color, and method of application of product being installed. Log must be available for inspection by the Architect upon request.
- E. Contractor to have proven experience with specified system.
- F. Portable mock-up: Prior to starting application of flooring, provide full scale portable mock-up to establish acceptable quality, durability, and appearance. Mock-up size must not be less than 4 square feet.
  - 1. Acceptable mock-up to be standard of quality for installed work.
  - 2. Unacceptable installed work to be removed and replaced until acceptable. Aesthetically unacceptable but well bonded work may be overlaid or recoated per Manufacturer's instructions if thickness clearances permit.
- G. Qualifications:
  - 1. Installer: Must be acceptable to Architect, and Manufacturer.

## **1.07 PROJECT CONDITIONS**

- A. Maintain the ambient room and the floor temperatures at 60°F, or above, for a period extending from 72 hours before, during and after floor installation. Concrete to receive surfacing shall have cured for at least 5 days.
- B. Dew Point: Substrate temperature must be minimum of 5 degrees above dew point prior to, during or up to 24 hours after application of flooring system.

- C. Illumination: Apply flooring system only where a minimum of 30 footcandles exist when measured 3 feet from surface.
- D. Advise other trades of fixtures and fittings not to be installed until flooring is cured and protected.

## **1.08 PROTECTION**

- A. Protect adjacent surfaces not scheduled to receive the flooring by masking, or by other means, to maintain these surfaces free of the flooring material.
- B. Provide adequate ventilation and fire protection at all mixing and placing operations. Prohibit smoking or use of spark or flame producing devices within 50 feet of any mixing or placing operation.
- C. Provide polyethylene or rubber gloves or protective creams for all workmen engaged in applying products containing epoxy.

## **1.09 PRODUCT DELIVERY, STORAGE, AND HANDLING**

- A. All materials shall be delivered to project site in original manufacturer's sealed containers including type of material, batch numbers, date of manufacture, and pertinent labels intact and legible.
- B. Store materials in dry protected area at a temperature between 60°F to 80°F.
- C. Follow all manufacturer's specific instructions and prudent safety practices for storage and handling.

## **1.10 WARRANTY**

- A. Contractor to guarantee work under this Section to be free from defects of material and installation for the duration of the warranty period. Defects occurring during warranty period shall be repaired, in a manner satisfactory to the Owner and the Architect, at no additional cost to the Owner.
  - 1. Warranty Period: One (1) Year.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Specifications and quality of design standard (basis of design) based on Key Resin Company: Key Chip 100.  
Key Resin Company: 888-943-4532, [www.keyresin.com](http://www.keyresin.com)
- B. System description: Two-component epoxy resin coating broadcast with colored chips (flakes) and sealed with two-component clear UV light resistant epoxy.
- C. Alternative manufacturers must have as a minimum the standards set forth in this specification and must be preapproved in accordance with project requirements.

### **2.02 MATERIALS**

- A. Cementitious Tile Backboard: See Section 09250 - Gypsum Drywall.

- B. Prime Coat: Two component penetrating damp-proof epoxy, Key #502. Silica filler to be added for overlaying ceramic tile, quarry tile or very rough or uneven concrete.
- C. Matrix: Two component epoxy resin binder, Key #515.
- D. Topcoat: Two component low viscosity UV light resistant epoxy sealer, Key #510-LV/UV.

## **2.04 MIXING**

- A. Apply flooring to specified physical properties.
- B. Provide decorative finish matching approved sample. Sample to be approved by Owner and Architect.

## **2.05 FINISHES**

- A. Color as selected by Architect or Owner from the manufacturer's standard colors.

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

- A. Obtain Architect's approval of mock-up before installing flooring; see QUALITY ASSURANCE in **PART 1**.
- B. Preparation of Surface:
  - 1. Inspect surfaces to receive flooring and verify that condition is smooth and free from conditions that will adversely affect execution, permanence, or quality of work.
    - a. Remove all projections, all debris detrimental to flooring system, and dirt, oil contaminates, grease, and surface coatings affecting bond.
  - 2. Notify Architect or Owner in writing prior to commencing work of any conditions deemed unsatisfactory for the installation; installation of flooring materials is understood as acceptance of the substrate as satisfactory.
  - 3. Ceramic tile or quarry tile: Thoroughly clean and grind surface to remove all glaze and create a textured profile. Delaminated or poorly adhered tile must be removed and the void filled with epoxy surfacing.
  - 4. Concrete: The General Contractor shall be responsible for hiring an independent testing service to test for moisture content and moisture vapor emission rate; install no flooring over concrete until the concrete has been cured and is sufficiently dry to achieve permanence with flooring as determined by material manufacturer's recommended bond and moisture tests.
    - a. Effectively remove concrete laitance by steel shot blasting or other method approved by flooring manufacturer.
    - b. Concrete slab shall have an efficient puncture-resistant moisture vapor barrier 10 mils thick minimum placed directly under the concrete slab (for slab on grade). Do not use vapor barrier manufactured with recycled material. Testing must be done to verify that the moisture vapor emission rate of the slab does not exceed that as recommended by the manufacturer at time of installation of the flooring or at any future date. Moisture vapor emission and moisture content testing must conform with the requirements of ASTM F1869-11 (Calcium Chloride Test) and ASTM F2170-11 (Relative Humidity Probe Test). If any single test result shows excessive levels of moisture content or vapor emission rate, apply

manufacturer's recommended moisture vapor emission control material based upon the highest reading.

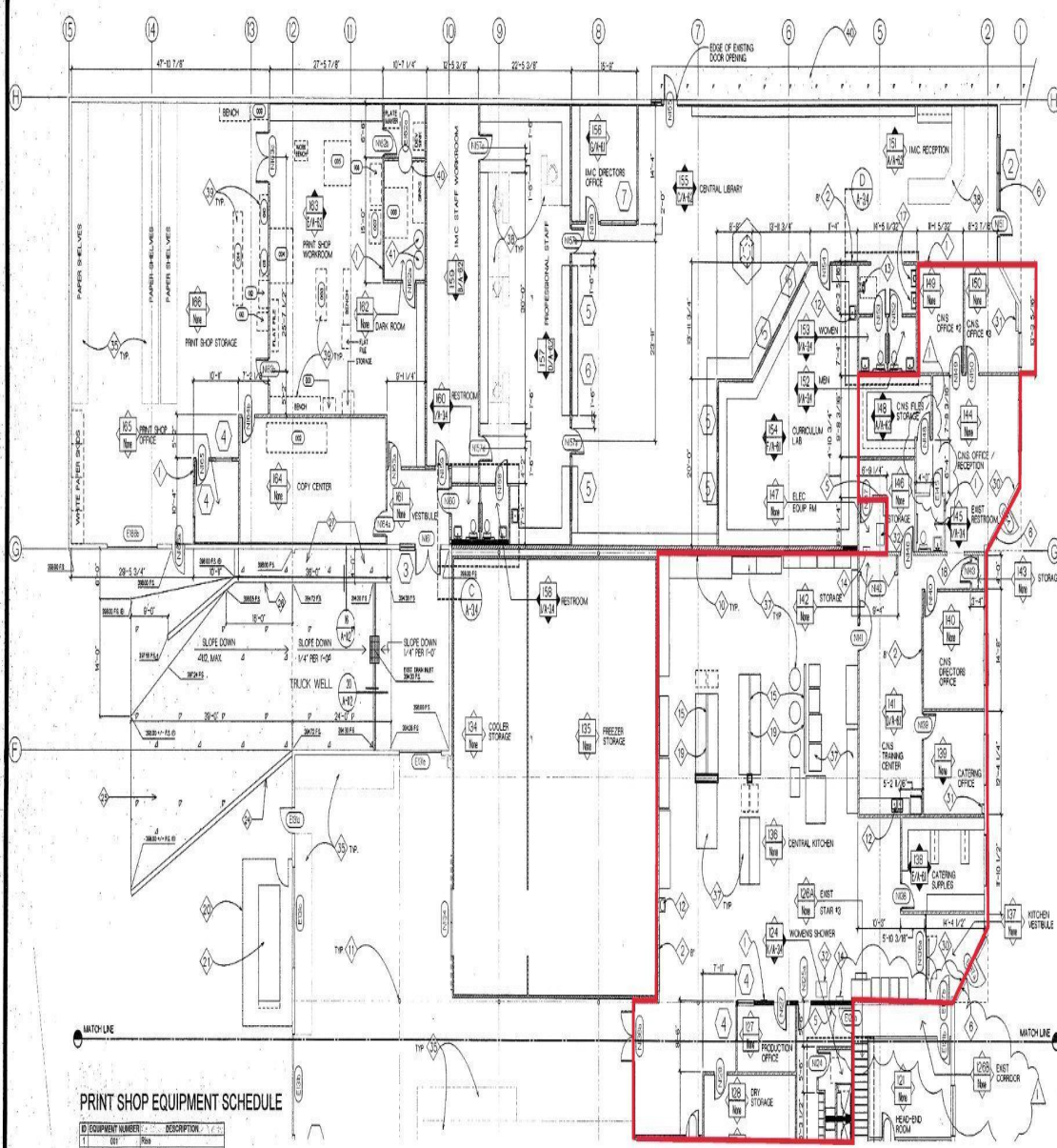
- c. Treat cracks in concrete using manufacturer's recommended practice. Rout out crack and fill with rigid epoxy. Refer to section 3.02.B.

### **3.02 INSTALLATION**

- A. Install all floor materials in strict conformance with manufacturer's instructions.
- B. Route out all cracks (larger than hairline width) and fill with Key #502, Key #715 Crack Filler or other material approved by Manufacturer of floor materials.
- C. Prime entire surface with recommended epoxy primer. Allow to cure. For properly prepared tile substrates, add filler powder to epoxy primer to create a slurry consistency. Flat trowel tight against tile to fill grout joints flush. Allow to cure. If grout joints are not completely flush, repeat procedure until joints are filled flush with tile surface.
- D. Apply Key #515 Epoxy Coating at 10-15 mils thickness and broadcast colored chips (flakes) to desired coverage density. Allow to cure. Scrape chips, sand lightly with buffer if necessary, sweep and vacuum loose chips.
- E. Apply UV light resistant epoxy topcoat Key #510-LV/UV at 10-15 mils thickness or as needed to match approved sample finish and allow to cure. Apply a second topcoat if needed to match approved sample finish and allow to cure. Top coat(s) shall provide a uniform, dense surface.
- F. Match finished work to approved sample, uniform in thickness, sheen, color, pattern and texture, and reasonably free from defects detrimental to appearance.
- G. Integral Cove Base: Where scheduled, provide integral cove base formed from flooring over tile backerboard as specified under 09250 - Gypsum Drywall. Provide cove cap strip at top of base as recommended by flooring manufacturer and trowel material up wall to form smooth, integral transition and base 4-6 inches high unless otherwise indicated or scheduled.
- H. Apply temporary protection until floor is fully cured. The General Contractor shall protect the finished floor from the time that the sub-contractor completes the work.

**END OF SECTION**

# CNS Plans



# PRINT SHOP EQUIPMENT SCHEDULE

| EQ. NUMBER | DESCRIPTION                  |
|------------|------------------------------|
| 1          | 101 Saw                      |
| 2          | 102 3675 Copy Machine        |
| 3          | 103 Versaform Printing Press |
| 4          | 104 Cutter                   |
| 5          | 105 Beta Parking Press       |
| 6          | 106 Quick Room Camera        |
| 7          | 107 Light Table              |
| 8          | 108 Plot Punch               |
| 9          | 109 Shrink Wrap              |
| 10         | 110 Pallet                   |
| 11         | 111 Core Box                 |
| 12         | 112 Slat                     |
| 13         | 113 Slat                     |
| 14         | 114 Slat                     |
| 15         | 115 Slat                     |

All Equipment Installed in D.F.C.U.

## FIRST FLOOR NEW WORK FLOOR PLAN - EAST

SCALE 1/8" = 1'-0"



ATTORNEY ELEVATION & PAVEN  
SCHEDULE ELEVATION KEY

## KEY PLAN

FOR KEY NOTES AND WALL  
LEGEND SEE SHT. A-3.0

VISTA UNIFIED SCHOOL DISTRICT CENTRAL FACILITY  
OCEANSIDE, CA  
YLSB, A.I.A. ARCHITECTS/PLANNERS  
92056 619-941-4647 / FAX 619-941-4518

FIRST FLOOR NEW  
WORK PLAN -  
EAST

REVISIONS  
PLAN CHECK  
EXCL - 4/10/98

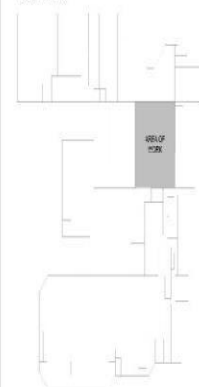
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A-3.2  
DATE  
3/28/98  
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940020.01

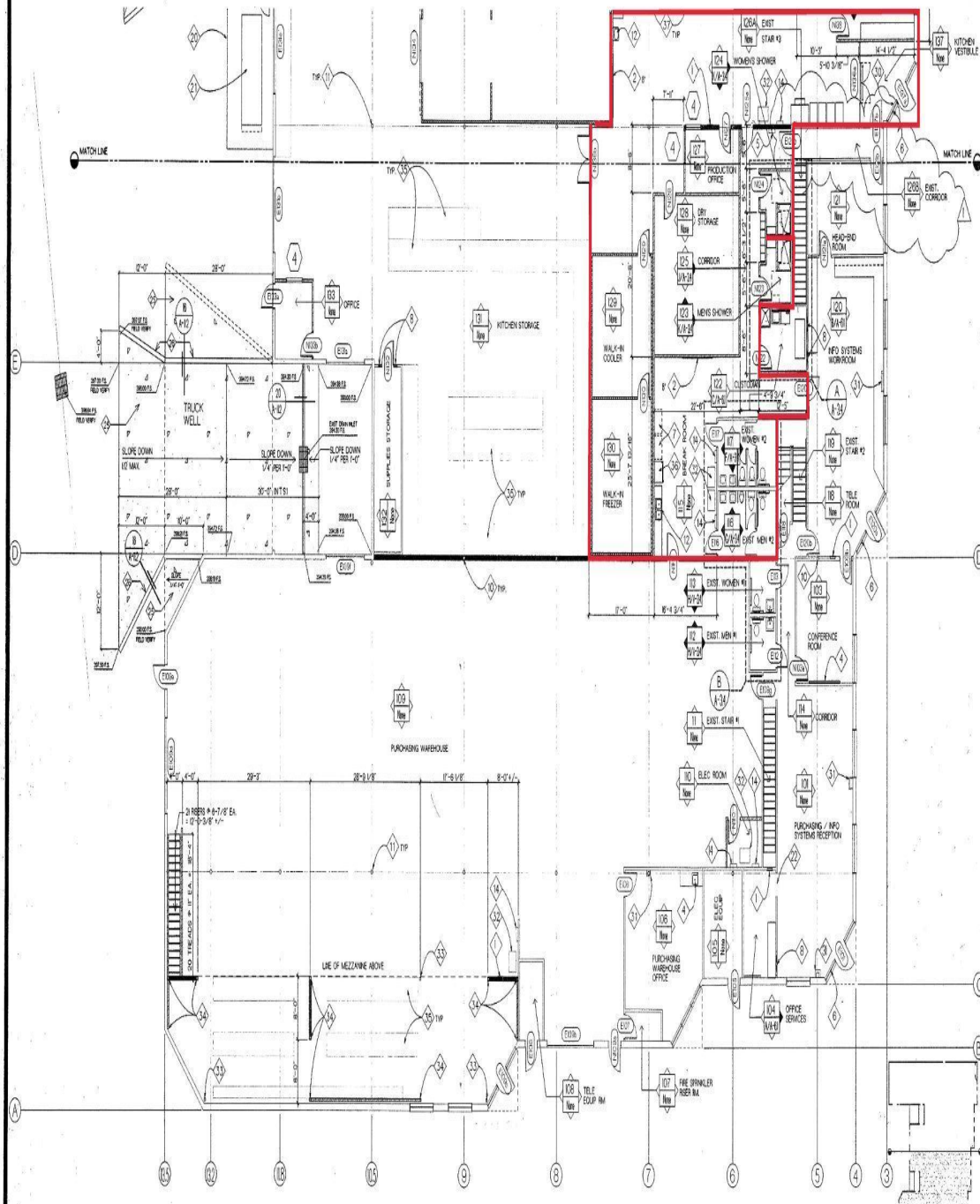


2 DEMOLITION FLOOR PLAN  
SCALE 1/8" = 1'-0"

ELECTRICAL ROOM  
NOT INCLUDED

## KEY MAP





# FIRST FLOOR NEW WORK FLOOR PLAN - WEST

SCALE 1/8" = 1'-0"



INTERIOR ELEVATION & FINISH  
SCHEDULE ELEVATION KEY

## KEY PLAN

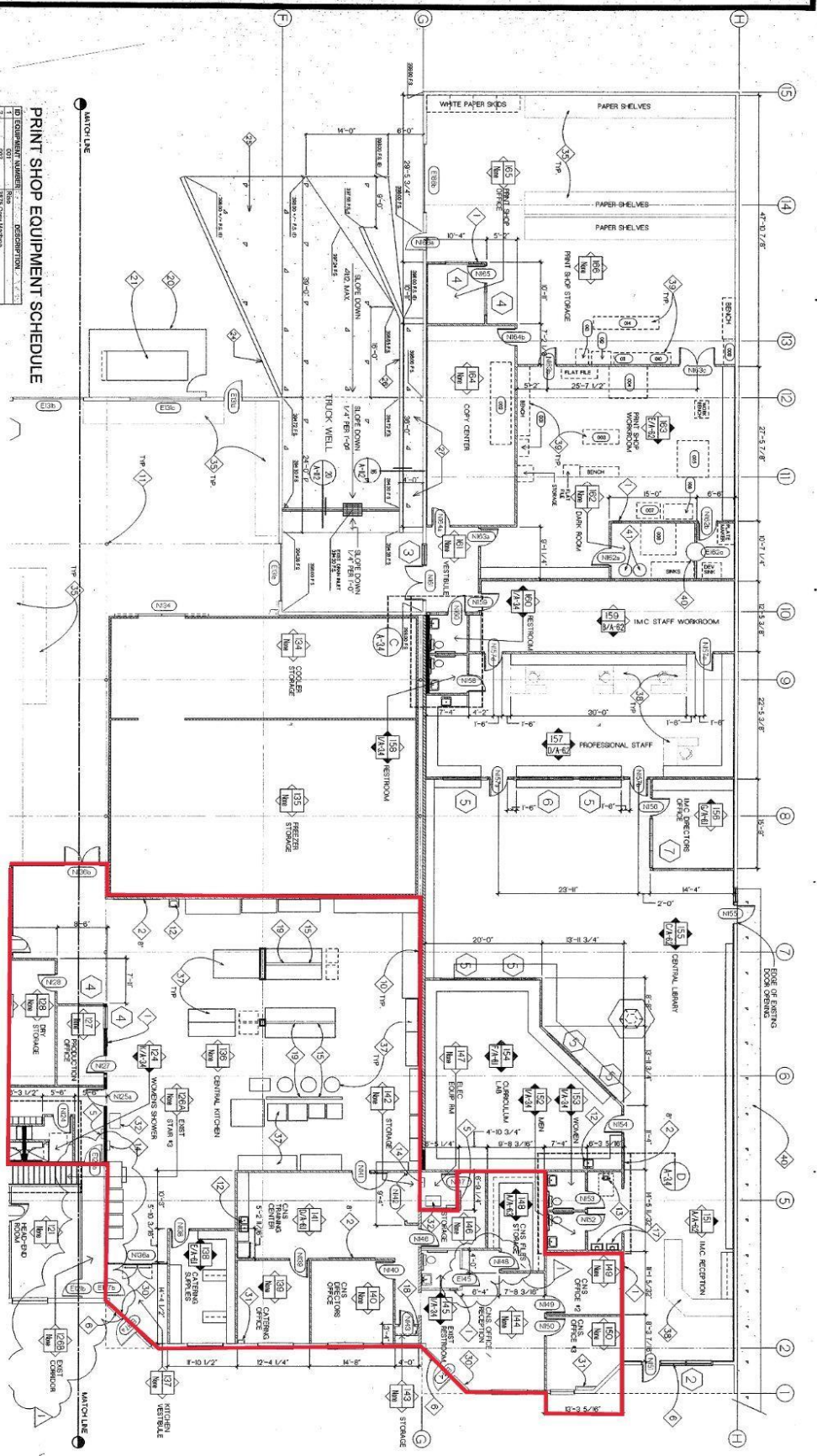
FOR KEY NOTES AND WALL  
LEGEND SEE SHT. A.3.0

VISTA UNIFIED SCHOOL DISTRICT CENTRAL FACILITY OCEANSIDE, CA.

WLSB, AIA ARCHITECTS/PLANNERS  
23056 OCEANSIDE BLVD. SUITE A OCEANSIDE, CA 92056 619-941-4947 / FAX: 619-941-4514



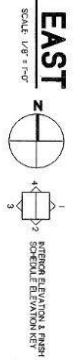
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| REVISIONS                        |            |
| PLAN CHECK                       |            |
| ESQUL - 4/19/96                  |            |
| SHEET                            | A-3.1      |
| DATE                             | 3/29/96    |
| JOB #                            | 9400.20.01 |



PRINT SHOP EQUIPMENT SCHEDULE

| ITEM | DESCRIPTION                 | QTY |
|------|-----------------------------|-----|
| 1    | 100" x 100" x 1/2" ALUMINUM | 1   |
| 2    | 100" x 100" x 1/2" ALUMINUM | 1   |
| 3    | 100" x 100" x 1/2" ALUMINUM | 1   |
| 4    | 100" x 100" x 1/2" ALUMINUM | 1   |
| 5    | 100" x 100" x 1/2" ALUMINUM | 1   |
| 6    | 100" x 100" x 1/2" ALUMINUM | 1   |
| 7    | 100" x 100" x 1/2" ALUMINUM | 1   |
| 8    | 100" x 100" x 1/2" ALUMINUM | 1   |
| 9    | 100" x 100" x 1/2" ALUMINUM | 1   |
| 10   | 100" x 100" x 1/2" ALUMINUM | 1   |
| 11   | 100" x 100" x 1/2" ALUMINUM | 1   |
| 12   | 100" x 100" x 1/2" ALUMINUM | 1   |
| 13   | 100" x 100" x 1/2" ALUMINUM | 1   |
| 14   | 100" x 100" x 1/2" ALUMINUM | 1   |
| 15   | 100" x 100" x 1/2" ALUMINUM | 1   |
| 16   | 100" x 100" x 1/2" ALUMINUM | 1   |
| 17   | 100" x 100" x 1/2" ALUMINUM | 1   |
| 18   | 100" x 100" x 1/2" ALUMINUM | 1   |
| 19   | 100" x 100" x 1/2" ALUMINUM | 1   |
| 20   | 100" x 100" x 1/2" ALUMINUM | 1   |

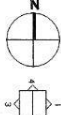
FIRST FLOOR NEW WORK FLOOR PLAN - EAST



KEY PLAN  
FOR KEY NOTES AND WALL  
LEGEND SEE SHEET A-3.0

# FIRST FLOOR NEW WORK FLOOR PLAN - WEST

SCALE 1/8" = 1'-0"

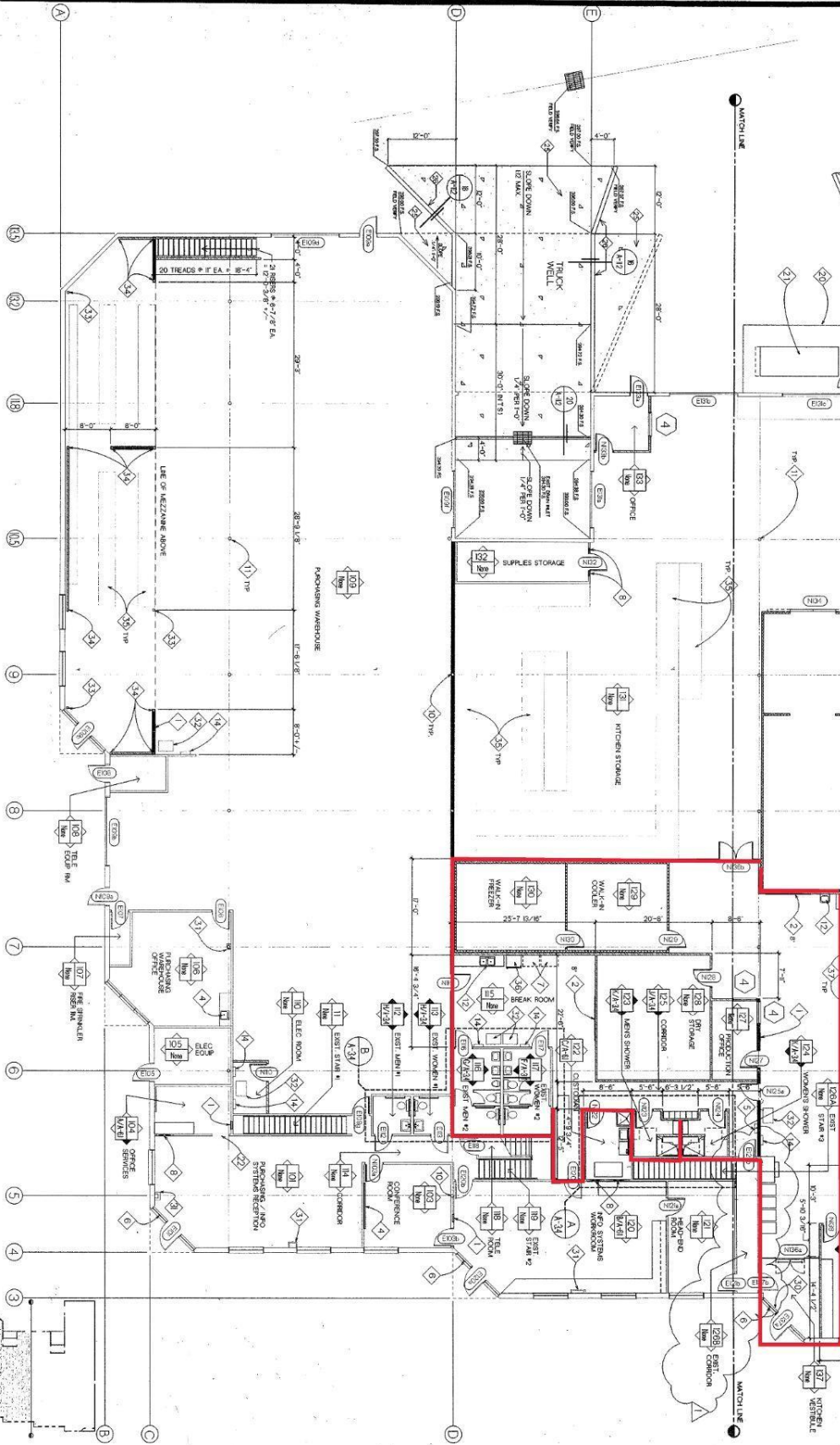


INTERIOR ELEVATIONS & NEW  
WORK FLOOR PLAN

KEY PLAN

FOR KEY NOTES AND WALL  
LEGEND SEE SHEET A-3.1

SHEET  
A-3.1  
DATE 3/29/96  
JOB # 9420-2001



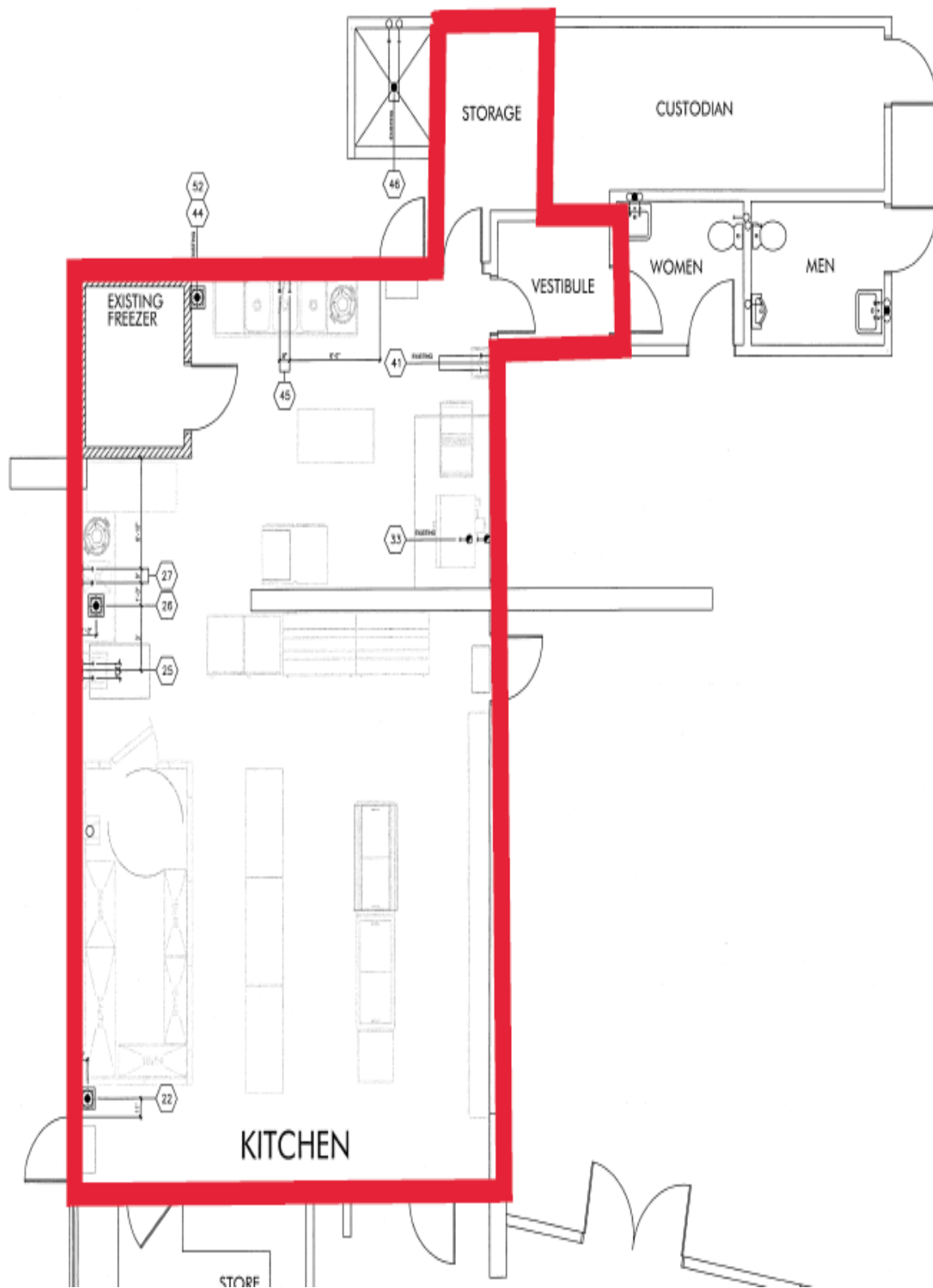
VISTA UNIFIED SCHOOL DISTRICT CENTRAL FACILITY

OCEANSIDE, CA.

VLSA, A.I.A. ARCHITECTS/PLANNERS

424-42 OCEANSIDE BLVD. SUITE A OCEANSIDE, CA 92056 619-941-4647 / FAX: 619-941-4514

# VAPA Plan



**ARCHITECTURAL GUIDE SPECIFICATION**

MASTER FORMAT SECTION 096700 – FLUID-APPLIED FLOORING

**KEY CHIP 100**

**20-30 Mil Decorative Epoxy Resinous Flooring  
UV Light Resistant Sealer**

**PART 1 GENERAL**

**1.01 SUMMARY**

**A. Section Includes:**

1. Fluid applied seamless flooring with integral cove base.
2. Joint, edge, and termination strips.
3. Prior to installation of structural floor slab, advise [General Contractor] [Construction Manager], in writing, of all requirements of concrete substrate regarding finish, level tolerance, and curing; see INSPECTION in Part 3.
4. Locate all flexible joints required. See submittals below.
5. Accessories necessary for complete installation.

**B. Related Sections:**

1. Cast-in-Place Concrete: Section 03300.
  - a. Concrete sub-floor to be level (maximum variation not to exceed ¼ inch in 10 feet) and to have a steel troweled finish. No curing agents or other additives which could prevent bonding should be used unless the mechanical surface preparation method completely removes the curing agent residue or sealer.
  - b. Slabs on grade must have an efficient puncture resistant vapor barrier placed directly under the slab.
2. Sealants: Section 07920.
3. Gypsum Drywall: Section 09250.
4. Adjacent floor finishes: Division 9.

**1.02 REFERENCE STANDARDS**

The publications listed below from a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

# KEY RESIN COMPANY

## *Guide Specification*



### A. American Society for Testing and Materials (ASTM) Publications:

- C-307 Test Method for Tensile Strength of Chemical-Resistant Mortars.
- C-501 Test Method for Relative Resistance to Wear Unglazed Ceramic Tile by the Taber Abraser.
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- MIL D-3 234 F (Resistance to Elevated Temperature) Section 4.7.5.

### C. ACI 301 Specifications for Structural Concrete for Buildings (most recent edition). Committee in Concrete 403 bulletin 59-43, Bond Strength to Concrete.

## 1.03 DEFINITIONS

- A. Epoxy Resin Flooring specified under this section is referenced on the drawings as [\_\_\_\_].

## 1.04 SYSTEM DESCRIPTION

- A. System shall be 20-30 mil epoxy coating with broadcast colored chips (flakes) to form a decorative surface. Surface finish shall be a clear two component UV light resistant epoxy sealer.

## 1.05 SUBMITTALS

- A. Samples: Submit 6 by 6 inch cured samples of flooring system indicating color combination and non-skid properties. Approved samples will be used during installation for product match.

# KEY RESIN COMPANY

## *Guide Specification*



- B. Certified Test: Submit two copies of suppliers/ manufacturers written certification that flooring system meets or exceeds required properties.
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- D. Shop Drawings: Shop Drawings shall be furnished showing installation of cove base and termination details, and details at floor material transitions and where adjoining equipment.
  - 1. Locate and provide detailing for flexible joints required for flooring in area of installation.
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- C. Installer to verify locations of all flexible joints required by the provisions of this Section and by the recommendations of the related material manufacturers.
  - 1. Joint locations may or may not be shown in drawings.
  - 2. Refer to drawings required under SUBMITTALS above.
- D. Installer to keep daily log of the date of installation, room number, type, color, and method of application of product being installed. Log must be available for inspection by the Architect upon request.
- E. Contractor to have proven experience with specified system.
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### **1.07 PROJECT CONDITIONS**

# KEY RESIN COMPANY

## *Guide Specification*



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- C. Follow all manufacturer's specific instructions and prudent safety practices for storage and handling.

### **1.10 WARRANTY**

- A. Contractor to guarantee work under this Section to be free from defects of material and installation for the duration of the warranty period. Defects occurring during warranty period shall be repaired, in a manner satisfactory to the Owner and the Architect, at no additional cost to the Owner.
  - 1. Warranty Period: One (1) Year.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Specifications and quality of design standard (basis of design) based on Key Resin Company: Key Chip 100.  
Key Resin Company: 888-943-4532, [www.keyresin.com](http://www.keyresin.com)
- B. System description: Two-component epoxy resin coating broadcast with colored chips (flakes) and sealed with two-component clear UV light resistant epoxy.

- C. Alternative manufacturers must have as a minimum the standards set forth in this specification and must be preapproved in accordance with project requirements.

### **2.02 MATERIALS**

- A. Cementitious Tile Backboard: See Section 09250 - Gypsum Drywall.
- B. Prime Coat: Two component penetrating damp-proof epoxy, Key #502. Silica filler to be added for overlaying ceramic tile, quarry tile or very rough or uneven concrete.
- C. Matrix: Two component epoxy resin binder, Key #515.
- D. Topcoat: Two component low viscosity UV light resistant epoxy sealer, Key #510-LV/UV.

### **2.04 MIXING**

- A. Apply flooring to specified physical properties.
- B. Provide decorative finish matching approved sample. Sample to be approved by Owner and Architect.

### **2.05 FINISHES**

- A. Color as selected by Architect or Owner from the manufacturer's standard colors.

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

- A. Obtain Architect's approval of mock-up before installing flooring; see QUALITY ASSURANCE in **PART 1**.
- B. Preparation of Surface:
  - 1. Inspect surfaces to receive flooring and verify that condition is smooth and free from conditions that will adversely affect execution, permanence, or quality of work.
    - a. Remove all projections, all debris detrimental to flooring system, and dirt, oil contaminates, grease, and surface coatings affecting bond.
  - 2. Notify Architect or Owner in writing prior to commencing work of any conditions deemed unsatisfactory for the installation; installation of flooring materials is understood as acceptance of the substrate as satisfactory.
  - 3. Ceramic tile or quarry tile: Thoroughly clean and grind surface to remove all glaze and create a textured profile. Delaminated or poorly adhered tile must be removed and the void filled with epoxy surfacing.
  - 4. Concrete: The General Contractor shall be responsible for hiring an independent testing service to test for moisture content and moisture vapor emission rate; install no flooring over concrete until the concrete has been cured and is sufficiently dry to achieve permanence with flooring as determined by material manufacturer's recommended bond and moisture tests.
    - a. Effectively remove concrete laitance by steel shot blasting or other method approved by flooring manufacturer.

# KEY RESIN COMPANY

## *Guide Specification*



- b. Concrete slab shall have an efficient puncture-resistant moisture vapor barrier 10 mils thick minimum placed directly under the concrete slab (for slab on grade). Do not use vapor barrier manufactured with recycled material. Testing must be done to verify that the moisture vapor emission rate of the slab does not exceed that as recommended by the manufacturer at time of installation of the flooring or at any future date. Moisture vapor emission and moisture content testing must conform with the requirements of ASTM F1869-11 (Calcium Chloride Test) and ASTM F2170-11 (Relative Humidity Probe Test). If any single test result shows excessive levels of moisture content or vapor emission rate, apply manufacturer's recommended moisture vapor emission control material based upon the highest reading.
- c. Treat cracks in concrete using manufacturer's recommended practice. Rout out crack and fill with rigid epoxy. Refer to section 3.02.B.

### **3.02 INSTALLATION**

- A. Install all floor materials in strict conformance with manufacturer's instructions.
- B. Route out all cracks (larger than hairline width) and fill with Key #502, Key #715 Crack Filler or other material approved by Manufacturer of floor materials.
- C. Prime entire surface with recommended epoxy primer. Allow to cure. For properly prepared tile substrates, add filler powder to epoxy primer to create a slurry consistency. Flat trowel tight against tile to fill grout joints flush. Allow to cure. If grout joints are not completely flush, repeat procedure until joints are filled flush with tile surface.
- D. Apply Key #515 Epoxy Coating at 10-15 mils thickness and broadcast colored chips (flakes) to desired coverage density. Allow to cure. Scrape chips, sand lightly with buffer if necessary, sweep and vacuum loose chips.
- E. Apply UV light resistant epoxy topcoat Key #510-LV/UV at 10-15 mils thickness or as needed to match approved sample finish and allow to cure. Apply a second topcoat if needed to match approved sample finish and allow to cure. Top coat(s) shall provide a uniform, dense surface.
- F. Match finished work to approved sample, uniform in thickness, sheen, color, pattern and texture, and reasonably free from defects detrimental to appearance.
- G. Integral Cove Base: Where scheduled, provide integral cove base formed from flooring over tile backerboard as specified under 09250 - Gypsum Drywall. Provide cove cap strip at top of base as recommended by flooring manufacturer and trowel material up wall to form smooth, integral transition and base 4-6 inches high unless otherwise indicated or scheduled.
- H. Apply temporary protection until floor is fully cured. The General Contractor shall protect the finished floor from the time that the sub-contractor completes the work.

**END OF SECTION**

REV 04/21/21 v1.0

# KEY #511-UV EPOXY

## Product Information Sheet



## DESCRIPTION

**KEY #511-UV** is a UV light resistant general purpose epoxy resin for slurries, mortars, broadcast systems and coating applications. This resin has excellent clarity compared to standard epoxy formulations. It is essentially odorless and can therefore be used in occupied buildings. **KEY #511-UV** provides increased barrier thickness and gives added protection to concrete against chemical and abrasive attack. **KEY #511-UV** Part A is available in bulk packaging and may be combined with selected Part B Hardeners for general use as a primer, body/binder coat, or top coat, contact **Key Resin** for details.

## KEY ADVANTAGES

- Convenient 2:1 mixing ratio
- Meets USGBC LEED criteria for low VOC
- Zero VOC, low odor for use in occupied areas
- Greater resistance to UV light ambering
- Low viscosity - good wetting properties
- Available in "fast cure" formulation
- Part A Resin compatible with various selected hardeners for general use as a primer, body coat, top coat
- Meets USDA standards for incidental food contact

## KEY CONSIDERATIONS

- Minimum application temperature of 50°F (Contact **Key Resin** for Low Temperature Cure)
- Substrate must be free of curing agents and any foreign materials
- On or below grade installation must have an efficient vapor barrier under the slab
- Special treatments are necessary where moisture vapor transmission may be present. Contact **Key Resin** for proper MVT treatments

## COLOR SELECTION

**KEY #511-UV** is available in Clear and Key Resin Standard Colors.

## COMPOSITION

100% solids Amine Cured Epoxy Resin.

## COVERAGE

**KEY #511-UV** coverage rate will vary by application method.

## CURE/DRY TIME

|                      |                      |
|----------------------|----------------------|
| Working Life         | 30-40 minutes @ 70°F |
| 10-20 mil Film       | 10-12 hrs            |
| Light Foot Traffic   | 16 hrs               |
| Ultimate Cure @ 74°F | 5 days               |
| Ultimate Cure @ 50°F | 14 days              |

## APPLICATION

### SURFACE PREPARATION

Surface Preparation is the most critical portion to any successful resinous flooring system application. All substrates must be properly prepared as outlined in **Key Resin Technical Bulletin #1**. Work must be performed by trained or experienced contractors or maintenance personnel. The **Key Resin Technical Service Department** is available to answer any questions.

### INSTALLATION

Will vary with system and application method.

## CHEMICAL RESISTANCE

| REAGENT                 | RATING |
|-------------------------|--------|
| Acetic Acid - 5%        | L      |
| Acetone                 | L      |
| Bleach                  | L      |
| Citric Acid - 30%       | R      |
| Crude Oil               | R      |
| Diesel Fuel             | R      |
| Ethylene Glycol         | R      |
| Fatty Acids             | L      |
| Gasoline                | R      |
| Hydrochloric Acid - 15% | R      |
| Lactic Acid - 15%       | R      |
| Methyl Ethyl Ketone     | L      |
| Nitric Acid - 10%       | R      |
| Skydrol                 | R      |
| Sodium Hydroxide - 50%  | R      |
| Sulfuric Acid - 20%     | R      |
| Toluene                 | R      |
| Urea                    | R      |
| Vinegar                 | L      |
| Xylene                  | R      |

R - Recommended for continuous splash/spill service

L - Limited recommendation (occasional spills, may cause slight stain or discoloration)

# KEY #511-UV EPOXY

## Product Information Sheet



### TECHNICAL DATA

|                                                   |                                                           |
|---------------------------------------------------|-----------------------------------------------------------|
| Mix Ratio                                         | 2 Parts A:1 Part B by Volume                              |
| Weight/gal                                        | 8.5-9 lbs. Mixed                                          |
| Solids Content                                    | 100%                                                      |
| Volatile Organic Content (VOC)<br>(EPA Method 24) | 0 g/L, compliant to low VOC<br>Rule 1113 in all 50 states |
| Gloss, 60°                                        | 85-100                                                    |
| Viscosity                                         | 400-600 cps, mixed approx.                                |

### AVAILABILITY

**Key Resin** materials are available throughout the United States, Canada, and a number of other countries. Contact the **Key Resin Representative** in your area for details.

### TECHNICAL SERVICE

**Key Resin Company** provides services and consultations on material selection, specification, troubleshooting, and other information on the proper repair and protection of concrete surfaces. **Key Resin Sales/Technical Representatives** are available to assist you. Telephone 888.943.4532 or visit [www.keyresin.com](http://www.keyresin.com).

### PHYSICAL PROPERTIES

|                                 |                                                    |                                                                   |
|---------------------------------|----------------------------------------------------|-------------------------------------------------------------------|
| Tensile Strength                | ASTM D638                                          | 8,500 psi                                                         |
| Elongation                      | ASTM D638                                          | 5.5%                                                              |
| Compressive Strength            | ASTM D695                                          | 11,000 psi                                                        |
| Adhesion to Concrete            | ASTM D7294                                         | 300+ psi<br>(Concrete Failure,<br>varies by concrete strength)    |
| Hardness, Shore D               | ASTM D2240, 24 hrs                                 | 75-80                                                             |
| Abrasion Resistance             | ASTM C501<br>(CS-17 wheel, 1 kg load, 1000 cycles) | 35-40 mg loss                                                     |
| Flexural Strength               | ASTM D790                                          | 8,000 psi                                                         |
| Indentation                     | MIL-D-3134J                                        | Withstands 2,000 lbs./sq.in. for<br>30 min. without indentation   |
| Impact Resistance               | MIL-D-3134J                                        | Withstands 16ft./lbs. no<br>cracking, delamination or<br>chipping |
| Elevated Temperature Resistance | MIL-D-313J                                         | No slip or flow at required<br>temperatures at 158°F              |
| Water Absorption                | ASTM D-670-63<br>(24. hr. immersion)               | 0.10% maximum                                                     |

### WARRANTY

**Key Resin Company** ("Key") warrants for a period of one (1) year that its products will be free of manufacturing defects and will be in conformity with published specifications when handled, stored, mixed, and applied in accordance with recommendations of Key. If any product fails to meet this warranty, the liability of Key will be limited to replacement of any non-conforming material if notice of such non-conformity is given to Key within (1) one year of delivery of materials. Key may in its discretion refund the price received by Key in lieu of replacing the material. No customer, distributor, or representative of Key is authorized to change or modify the published specifications of this warranty in any way. No one is authorized to make oral warranties on behalf of Key. In order to obtain replacement or refund the customer must provide written notice containing full details of the non-conformity. Key reserves the right to inspect the non-conforming material prior to replacement. EXCEPT FOR THE EXPRESSED WARRANTY STATED ABOVE, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE. KEY'S OBLIGATION SHALL NOT EXTEND BEYOND THE OBLIGATIONS EXPRESSLY UNDERTAKEN ABOVE AND KEY SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO THE PURCHASER OR ANY THIRD PARTY FOR ANY LOSS, COST, EXPENSE, DAMAGE OR LIABILITY, WHETHER DIRECT OR INDIRECT, OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

#### CORPORATE OFFICE / EASTERN US / INTERNATIONAL

4050 Clough Woods Drive . Batavia, OH 45103  
513.943.4225 888.943.4532 [www.keyresin.com](http://www.keyresin.com)

Rev 6/26/2020

#### WESTERN US

4330 N. 43rd Street . Phoenix, AZ 85031  
602.523.9353

Key: Bold – Non-Student Day

VISTA UNIFIED SCHOOL DISTRICT

Board Approved: 12/14/21

\*- Minimum Day

2024-2025 School Calendar

Board Revision Date: 4/18/24

| School Month | M                                      | T                                       | W                               | T                               | F                                              | Student Days | Teacher Days | Key Dates/Explanations                                                                                                                                                                                                                                                                                                            |
|--------------|----------------------------------------|-----------------------------------------|---------------------------------|---------------------------------|------------------------------------------------|--------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| July         | 1<br>8<br>15<br>22<br>29               | 2<br>9<br>16<br>23<br>30                | 3<br>10<br>17<br>24<br>31       | <b>4</b><br>11<br>18<br>25      | 5<br>12<br>19<br>26                            |              |              | July 4 (Independence Day <i>Legal Holiday</i> )                                                                                                                                                                                                                                                                                   |
| August       | 5<br><b>12</b><br>19<br>26             | 6<br><b>13</b><br>20<br>27              | 7<br><b>14</b><br>21<br>28      | 1<br>8<br><b>15</b><br>22<br>29 | 2<br><b>9</b><br>16<br>23<br>30                | 12           | 16           | Aug. 9 (District Professional Dev. Day Non-Student Day)<br>Aug. 12 (District Professional Dev. Day Non-Student Day)<br>Aug. 13 (Teacher Preparation Day <i>Non-Student Day</i> )<br>Aug. 14 (Site Professional Dev. Day <i>Non-Student Day</i> )<br><b>Aug. 15 (First Day of School)</b>                                          |
| September    | <b>2</b><br>9<br>16<br>23<br>30        | 3<br>10<br>17<br>24                     | 4<br>11*<br>18<br>25            | 5<br>12<br>19<br>26             | 6<br>13<br>20<br>27                            | 20           | 20           | Sept. 2 (Labor Day <i>Legal Holiday</i> )<br>Sept. 11 (K-8 Staff Development Day <i>Minimum Day</i> )                                                                                                                                                                                                                             |
| October      | 7<br>14<br>21<br>28                    | 1<br>8<br>15<br>22<br>29                | 2<br>9<br>16<br>23<br>30        | 3<br>10*<br>17<br>24<br>31      | 4<br>11*<br>18<br>25                           | 23           | 23           | Oct. 10 & 11 (MVHS Finals <i>Minimum Days</i> )                                                                                                                                                                                                                                                                                   |
| November     | 4<br><b>11</b><br>18<br><b>25</b>      | 5<br>12*<br>19<br><b>26</b>             | 6<br>13*<br>20<br><b>27</b>     | 7<br>14*<br>21<br><b>28</b>     | <b>1</b><br>8<br>15*<br><b>22</b><br><b>29</b> | 14           | 14           | Nov. 1 (Non-Student/Non-Staff Day)<br>Nov. 11 (Veteran's Day <i>Legal Holiday</i> )<br>Nov. 12 - 15 (K-5 Parent Teacher Conf. <i>Minimum Days</i> )<br>Nov. 13 & 14 (6-8 Parent Teacher Conf. <i>Minimum Day</i> )<br>Nov. 25 - 29 (K-12 Non-Student Days)<br>Nov. 28 (Thanksgiving Holiday <i>Legal Holiday</i> )                |
| December     | 2<br>9<br>16<br><b>23</b><br><b>30</b> | 3<br>10<br>17<br><b>24</b><br><b>31</b> | 4<br>11<br>18*<br><b>25</b>     | 5<br>12<br>19*<br><b>26</b>     | 6<br>13<br>20*<br><b>27</b>                    | 15           | 15           | Dec. 18 - 20 (RBVHS & VHS Finals <i>Minimum Days</i> )<br>Dec. 19 & 20 (MVHS Finals <i>Minimum Days</i> )<br>Dec. 23 - 31 (Winter Recess School Resumes Jan.8)<br>Dec. 25 (Christmas Day <i>Legal Holiday</i> )                                                                                                                   |
| January      | <b>6</b><br>13<br><b>20</b><br>27      | <b>7</b><br>14<br>21<br>28              | <b>1</b><br>8<br>15<br>22<br>29 | <b>2</b><br>9<br>16<br>23<br>30 | <b>3</b><br>10<br>17<br>24<br>31               | 17           | 19           | Jan. 1 (New Year's Day <i>Legal Holiday</i> )<br>Jan. 1 - 5 (Winter Recess School Resumes Jan. 8)<br>Jan. 6 (HS Professional Dev. Day <i>Non-Student Day</i> )<br>Jan. 6 (K-8 Non-Student/Non-Staff Day)<br>Jan. 7 (District Professional Dev. Day <i>Non-Student Day</i> )<br>Jan. 20 (M.L. King Birthday <i>Legal Holiday</i> ) |
| February     | 3<br>10<br><b>17</b><br>24             | 4<br>11<br>18<br>25                     | 5<br>12<br>19<br>26*            | 6<br>13<br>20<br>27             | 7<br><b>14</b><br>21<br>28                     | 17           | 17           | Feb. 13 (Non-Student/Non-Staff Day)<br>Feb. 14 (Lincoln's Birthday Observed <i>Legal Holiday</i> )<br>Feb. 17 (President's Day <i>Legal Holiday</i> )<br>Feb. 26 (K-8 Staff Development Day <i>Minimum Day</i> )                                                                                                                  |
| March        | 3<br>10<br>17<br>24<br><b>31</b>       | 4<br>11<br>18<br>25                     | 5<br>12*<br>19<br>26            | 6<br>13*<br>20*<br>27           | 7<br>14<br>21*<br>28                           | 20           | 20           | March 12 & 13 (6 - 8 Parent/Teacher Conf. <i>Minimum Day</i> )<br>March 20 & 21 (MVHS Finals <i>Minimum Day</i> )<br>March 31 (Spring Break)                                                                                                                                                                                      |
| April        | 7<br>14<br>21<br>28                    | <b>1</b><br>8<br>15<br>22<br>29         | <b>2</b><br>9<br>16<br>23<br>30 | <b>3</b><br>10<br>17<br>24      | <b>4</b><br>11<br>18<br>25                     | 18           | 18           | April 1 - 4 (Spring Break)                                                                                                                                                                                                                                                                                                        |
| May          | 5<br>12<br>19<br><b>26</b>             | 6<br>13<br>20<br>27                     | 7<br>14<br>21<br>28             | 1<br>8<br>15<br>22<br>29        | 2<br>9<br>16<br>23<br>30                       | 21           | 21           | May 26 (Memorial Day <i>Legal Holiday</i> )                                                                                                                                                                                                                                                                                       |
| June         | 2*<br>9<br>16<br>23<br>30              | 3*<br>10<br>17<br>24                    | <b>4*</b><br>11<br>18<br>25     | 5<br>12<br>19<br>26             | 6<br>13<br>20<br>27                            | 3            | 3            | June 2 - 4 (RBV/VHS Finals <i>Minimum Days</i> ) June 3 & 4 (MVHS Finals <i>Minimum Days</i> )<br><b>June 4 (Last Day of School <i>Minimum Day</i> – All)</b><br>June 19 (Juneteenth <i>Legal Holiday</i> )                                                                                                                       |

180 STUDENT DAYS

186 STAFF DAYS